

PAT-NO: JP02002353458A

DOCUMENT-IDENTIFIER: JP 2002353458 A

TITLE: THIN FILM SEMICONDUCTOR ELEMENT AND  
MANUFACTURING METHOD  
THEREFOR

PUBN-DATE: December 6, 2002

INVENTOR-INFORMATION:

NAME

SASAKI, ATSUSHI

COUNTRY

N/A

ASSIGNEE-INFORMATION:

NAME

MATSUSHITA ELECTRIC IND CO LTD

COUNTRY

N/A

APPL-NO: JP2001156015

APPL-DATE: May 24, 2001

INT-CL (IPC): H01L029/786, H01L021/283 , H01L021/316 , H01L021/318

ABSTRACT:

PROBLEM TO BE SOLVED: To provide a thin film semiconductor element of superior reliability and characteristics and its manufacturing method by using a gate insulating film, which prevents deterioration of the reliability of the thin film semiconductor element due to oxide formation of tungsten and deterioration of characteristic due to gate insulating film quality.

SOLUTION: The thin film semiconductor element is provided with a silicon semiconductor film 2 having a prescribed form, a first gate insulating film 3 having a prescribed form, a second gate insulating film 4 having a prescribed form, and a gate electrode film 5; the first gate insulating film 3 is a

silicon oxide film, where an absolute value of film stress is at most 300 MPa;  
the second gate insulating film 4 is a silicon oxinitride film; and  
the gate  
electrode film 5 is formed of alloy of molybdenum and tungsten.

COPYRIGHT: (C) 2003, JPO